

## Area of a Circle

Remember, area is how much surface a shape covers.

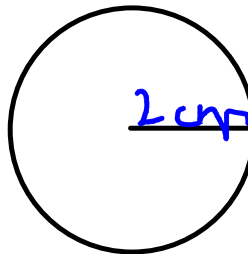
Formula for Area of a circle:

$$A = \pi r^2$$

Remember, that this means  $\pi \times r \times r$  and NOT

$$\pi \times r \times 2$$

Example:



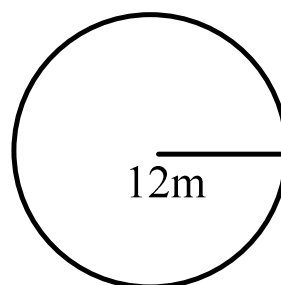
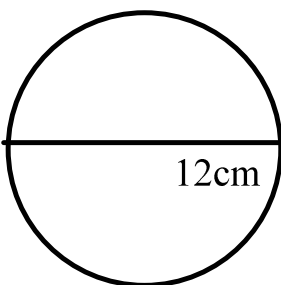
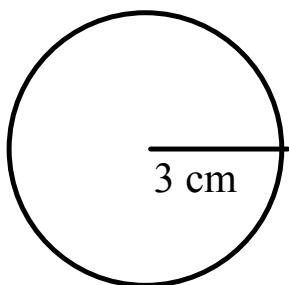
$$A = \pi r^2$$

$$A = 3.14 \times 2 \times 2$$

$$A = 12.6 \text{ cm}^2$$

Homework: pg 250-251 #1-3, 5 and 9

1. Estimate the area of each circle (pretend pi is 3 instead of 3.14)



2. Calculate the area of each circle in question 1.  
Give the answers to the nearest square mm.

$$\begin{aligned} &= 3.14 \times 10 \\ &= 31.4 \text{ cm} \end{aligned}$$

$$\begin{aligned} &= 2(3.14)(7) \\ &= 43.96 \\ &= 44.0 \text{ cm} \end{aligned}$$

$$= 47.1$$

Use the results of questions one and 2.

What happens if you double the radius of a circle.

What happens to its area?

What do you think happens to the area if you triple its radius?

Justify your answers.

In the biathlon, athletes shoot at targets.

Each target is 50 m from the athlete

Find the area of each target

a) the target for the athlete who is standing is a circle with diameter 11.5cm

b) The target for an athlete who is prone is a circle with diameter 4.5 cm.

Give the answers to the nearest square cm.

9. A large pizza has a diameter of 35 cm  
Two large pizzas cost \$19.99

A medium has a diameter of 30 cm  
3 mediums cost \$24.99

Which is the better deal? Two larges or 3 mediums?

Justify your answer.